

# ADVANCE ADAPTERS INC.

P.O. Box 247, 4320 Aerotech Center Way  
Paso Robles, CA 93447

Telephone: (800) 350-2223 Fax: (805) 238-4201

P/N: **RUBI-JKA**

New Item: (9/09)

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Page Rev. Date: **09-25-15**

## RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)

### KIT CONSISTS OF:

| No. | Qty | Part No.  | Description                                    |
|-----|-----|---|--|
| 1.  | 1   | <b>RUBI-JKA - GEAR BOX</b>                        | Kit also includes:                             |
|     | 1   | 42R350  | - CHRYSLER RTV SEALANT                         |
|     | 1   | 42R540  | - BOLT- M10-1.5 X 30mm BHCS                    |
|     | 4   | 720015  | - WASHER- 10mm FLAT                            |
|     | 10  | 720028  | - BOLT- M10-1.5 X 35mm SHCS                    |
|     | 4   | 720073  | - BOLT- M10-1.5 X 25mm HHCS                    |
| 2.  | 1   | <b>42R800-CONTROL MODULE KIT</b>                  |  |
| 3.  | 1   | <b>42R-JKS - SHIFTER KIT &amp; JK CROSSMEMBER</b> |  |
|     | 4   | 303081  | BUSHING- IGUS 1/2" X 1/2"                      |
|     | 1   | 303121  | NUT-1/2-13 HX JAM BLACK ZINC                   |
|     | 1   | <b>*303309-1</b>                                  | <b>CABLE-ATLASSHIFTER 48" LENGTH 1" TRAVEL</b> |
|     | 24  | <b>*303311</b>                                    | <b>HEATSHIELD-FIREPROOF SLEEVE 1/2"</b>        |
|     | 1   | <b>*303313</b>                                    | <b>ROD END-FEMALE 1/4"-28</b>                  |
|     | 1   | 303313  | ROD END-FEMALE 1/4"-28                         |
|     | 2   | 303335  | KNOB MOUNT-CABLE SHIFTER TJ                    |
|     | 4   | 303339  | BOLT- 1/4"-28 X .75" F.H.C.S.                  |
|     | 2   | 303341  | BOLT- 1/4"-28 X 5/8" B.H.C.S.                  |
|     | 1   | 42R320  | BRACKET-RUBICRAWLER FOOT MOUNT JK              |
|     | 1   | <b>*42R441</b>                                    | <b>BRACKET-RUBICRAWLER CABLE MOUNT</b>         |
|     | 1   | 42R580  | BRACKET-JK FUEL LINE SUPPORT                   |
|     | 1   | 42R581  | NUT CLIP ON 6MM                                |
|     | 1   | 42R582  | S.H.C.S. 6MM-1.00 X 8 MM LONG                  |
|     | 1   | 42R600  | BRACKET-JK SHIFT BASE PLATE                    |
|     | 1   | 42R601  | BRACKET-PIVOT MOUNT                            |
|     | 1   | 42R602  | HANDLE ASSEMBLY-JK DRIVER                      |
|     | 1   | 42R603  | HANDLE ASSEMBLY-JK PASSENGER                   |
|     | 1   | 42R608  | BARREL-CABLE                                   |
|     | 1   | 42R609  | SPRING- WAVE                                   |
|     | 1   | 42R610  | BRACKET- BARREL RETAINER                       |
|     | 1   | 42R611  | SHAFT-JK PIVOT                                 |
|     | 1   | 42R612  | BRACKET- JK INTERIOR STOCK CABLE MOUNT         |
|     | 8   | 42R616  | BOLT- 1/4"-20 X 5/16" B.H.C.S.                 |
|     | 1   | 42R616  | BOLT- 1/4"-20 X 5/16" B.H.C.S.                 |
|     | 2   | 42R617  | BOLT- 1/4"-20 X 3/8" B.H.C.S. PLAIN            |
|     | 1   | 42R618  | BOLT- 5/16"-18 X 3.25" H.H.C.S.                |
|     | 1   | 42R620  | BRACKET-OEM JKT-CASE SHIFTER                   |
|     | 1   | 42R621  | BRACKET-JK STOCK CABLE RETAINER                |
|     | 1   | 42R651  | KNOB-JK RUBICRAWLER                            |

### Optional Items:

#### Part No. Description

|         |  |
|---------|--|
| 15-1000 | - UNI-RAISE, Drivetrain Lifting Device |
| 42R360  | - CHRYSLER ATF+4 (Qty. 4 Recommended)  |
| 42R370  | - 42RLE Transmission Filter            |

**\*THESE ITEMS ARE ASSEMBLED AND  
ADJUSTED FOR THE INSTALLATION.**

|    |   |        |                            |
|----|---|--------|----------------------------|
| 31 | 1 | 42R652 | KNOB-JKT-CASE              |
| 32 | 2 | 720040 | S.H.C.S. 8MM X 1.25 X 20MM |
| 33 | 4 | 720057 | 6MM X 1.00 X 16MM H.H.C.S. |
| 34 | 4 | 722513 | LOCK WASHER 1/4" PLT.      |
| 35 | 4 | 722523 | 1/4" USS FLAT WASHER PLTD. |
| 36 | 1 | 722523 | 1/4" USS FLAT WASHER PLTD. |
| 37 | 1 | 723141 | 5/16"-18 NYLOC HEX NUT     |
| 38 | 2 | 723740 | 3/8"-16 X 1-1/2" S.H.C.S.  |

The JK's retain the stock shifter cable on the transfer case. The bushings on the shifter cable may be worn or if broken when removing may need to be replaced. The Chrysler P/N is 68064273AA.

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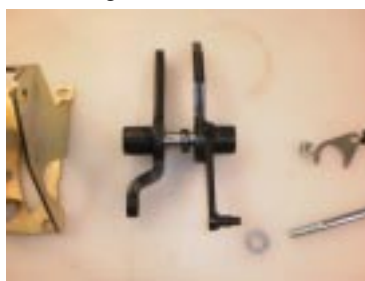
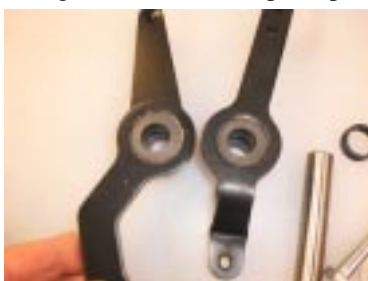
Page Rev. Date: **06-28-11**

## **RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)**

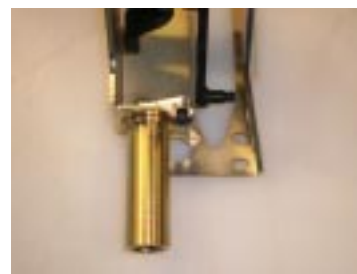
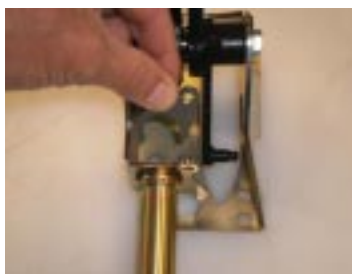
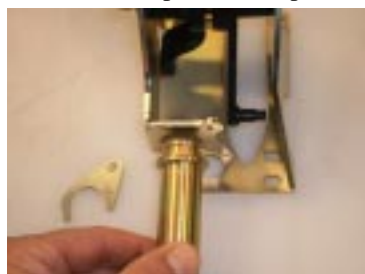
These are the bottom 12 items listed under the shifter kit components on the first page. These items do need to be assembled.



The Igus bushings must be **pressed** into the shift handles. An arbor press or a light hand with a hammer works well. Once the bushings are installed the pivot pin gets installed through the handles with the wave washer between them.



Install the handles into the bracket housing and install the bolt to secure the assembly in place. Install the cable barrel and use the retainer clip to hold in place.



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## **RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)**

### **Tool List:**

1. FULL SET OF HAND TOOLS INCLUDING:
  - 6 mm ALLEN WRENCH
  - 16 mm DEEP SOCKET
  - 8mm HEX BIT SOCKET
  - 3/8" DRIVE RATCHET
  - 15/16" WRENCH
  - 5/32" ALLEN WRENCH
2. 3/8" TORQUE WRENCH  
(25 TO 40 FT.-LBS. REQUIRED)
3. GASKET SCRAPER
4. SMALL BRASS WIRE BRUSH
5. CLEANING SOLVENT  
(PAINT THINNER, ACETONE, MEK ETC) DO  
NOT USE DEGREASERS LIKE SIMPLE GREEN
6. STUBBY 9/16" WRENCH REQUIRED,  
RATCHETING RECOMMENDED.
7. T20, T30, AND T45 TORX BIT SOCKETS.
8. SLIDE HAMMER.

Note: on new installations if the transfer case is re-clocked up closer to the floor board, we have had customers complain of vibrations in the drivetrain. Clocking the transfer case changes the driveline angles, which creates a vibration and most think it is because of the new RubiCrawler. Re-clocking the transfer case from stock will require axle pinion angle adjustments.

**INTRODUCTION: The RubiCrawler is a two speed crawl box for Jeep Wranglers, TJs and JKs, from 2003-2010 with the factory automatic transmission (42RLE). This particular kit (RUBI-JKA) includes twin stick shifters for the 2007-2010 Jeep JK Wrangler with the factory NP241 and will not work with an aftermarket transfer case such as the Atlas.**

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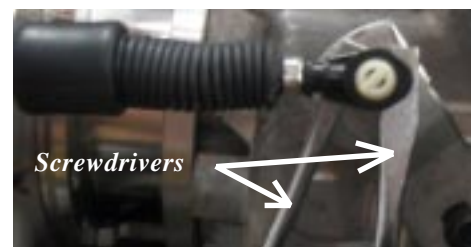
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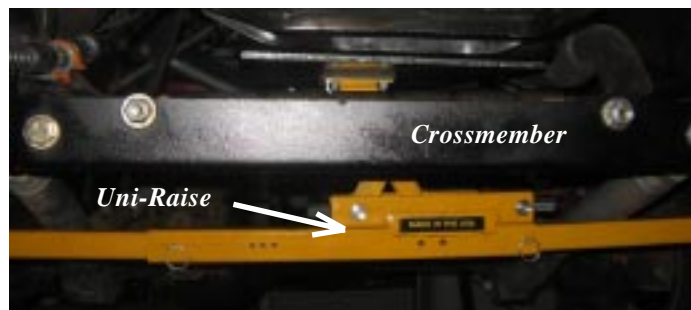
### Disassembly/Preparation For Assembly:

1. Remove drive shafts and any skid plates that prevent access to the transfer case or the transmission.
2. Disconnect the breather hose and the wiring harness from the transfer case.
3. As shown in *Figure 1*, using two flat head screw drivers remove the rod end from the transfer case. **Caution** must be used to remove the stock shifter cable as prying on one side can crack the stock shifter cable rod end.



*Figure 1: Rod End Removal*

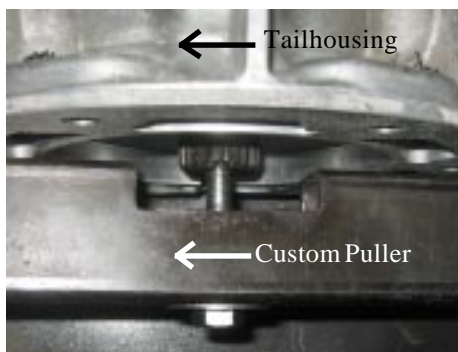
4. Remove the transfer case from the vehicle by removing the 6 nuts from the transfer case studs. Using a stubby 9/16" wrench makes this step much easier.



*Figure 2: Uni-Raise installation aid*

5. Remove the transfer case shift cable from the bracket mounted to the tailhousing by squeezing the tabs on the orange plastic retaining clip and pulling down on the cable (Clip will not be reused). Then remove the three 10mm bolts securing the transfer case shifter bracket to the tailhousing.

6. Use an Advance Adapters Uni-Raise (PN: 15-1000) (See *Figure 2*) or some other device to support the transmission pan to support its weight. Take **caution** to avoid denting the pan and damaging the transmission.



*Figure 3: Custom Puller Method*



*Figure 4: Pry Method*

7. Remove the foot-mount from the tailhousing of the transmission by unbolting the four 10 mm hex head bolts.
8. Unbolt the fuel system tab from the transmission tailhousing.
9. Remove the wiring harness from the tailhousing by prying up the plastic barb on the driver's side of tailhousing.
10. Remove the spud shaft by following one of the three suggested methods below. The end of the spud shaft is tapped M10-1.5.

- i. Slide Hammer -(factory service manual method): Note: aggressive use may be necessary.

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- ii. Custom Puller (recommended method)- Make a custom device to span the tailhousing without contacting the end of the shaft. Thread a M10x1.5 bolt through tool and into the spud shaft. (See *Figure 3*)
- iii. Pry Method (fast but only works on some vehicles)- Use a piece of sheet metal to protect the tailhousing and bolt a large washer to the shaft. Use a pry bar to pry the shaft loose taking care not to damage the tailhousing. (See *Figure 4*)

11. Prepare a drip pan. Removing the tailhousing will result in 2-4 quarts of transmission fluid loss depending on the angle of the drivetrain.
12. Remove the transmission tailhousing by removing the 11 hex head bolts and allow oil to drain for 10 minutes.
13. Insert a CLEAN shop rag into the back of the transmission as shown in the picture below to prevent contaminants from entering your transmission. (See *Figure 5*)
14. Thoroughly clean the rear face of the transmission. Use solvent and a brass wire brush to clean all of the RTV off of the mating face and take caution to avoid any debris from entering the transmission or transmission bearing. (See *Figure 6*) It may be necessary to trim excess RTV that protrudes up from the transmission pan onto the rear face of the transmission. Excess RTV can prevent the RubiCrawler from fully mating to the transmission face.
15. Remove the spud shaft retaining clip from the groove near the end of the transmission output shaft.



*Figure 5: Rag Placement*



*Figure 6: Clean Transmission*



*Figure 7: Rear Bolt Location*



*Figure 8: Trim Ring*

### Interior Disassembly:

1. Removing the driver's seat will make the interior install easier, but **PRECAUTION** needs to be taken. The seat must be handled with care as the seat weight sensor is a sensitive calibrated unit and can be damaged if dropped or sat on when not in the vehicle. To remove the seat, first disconnect the negative terminal of the battery and wait two minutes for the system capacitors to drain. Next disconnect the two electrical connectors below the seat and then the seat can be removed. Refer to the service manual for more informa-

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tion on removing the seat.

2. Remove the four T30 Torx bolts on the sides of the console, 2 on the driver's side and 2 on the passenger side (See Figure 7).
3. Remove the transmission shifter knob. Begin by grabbing the trim ring at the base of the shift knob and gently pull down while twisting it. Remove the Torx bolt with a T20 bit. The transmission shift knob can now be removed from the lever. (See Figure 8)
4. Remove the transfer case shift knob. You must grab firmly and pull straight up until it pops off. A glove is recommended to protect your hand during this step, as the removal can sometimes be difficult.
5. Pull parking brake as far up as it will go.
6. Remove the lower dash panel by prying with a small flat head screw driver at the top of the panel until it pops loose and then slide it out. (See Figure 9)
7. Remove upper console by pulling up gently on the rear of it. It is held on with metal clips that will pop out as it is lifted up and removed. (See Figure 10)
8. Remove the lower console.
9. Remove the transfer case shifter housing top cover. (See Figure 11)
10. Remove the 4 mounting nuts that hold down the shifter housing with a 10mm socket. Save these nuts as they will be reused.
11. Turn the transfer case shifter housing on its side.
12. Carefully remove the shifter rod end from the pin using 2 flat head screw drivers. Great care must be taken



Figure 9: Lower Dash Panel



Figure 10: Removing Upper Console



Figure 11: Remove Shift Cable from Housing



Figure 12: Rod End Removal



Figure 13: Transfer Case Shift Housing

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## RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)

to avoid breaking the plastic rod end. (See Figure 12)

13. Remove the shift housing from the shift cable by un-clipping the plastic cable mount and sliding it out. (See Figure 13)
14. Pull shift cable grommet down through floor and cut a slit to allow RubiCrawler cable to pass through on the passenger side. Note: cable will be installed in a later step.

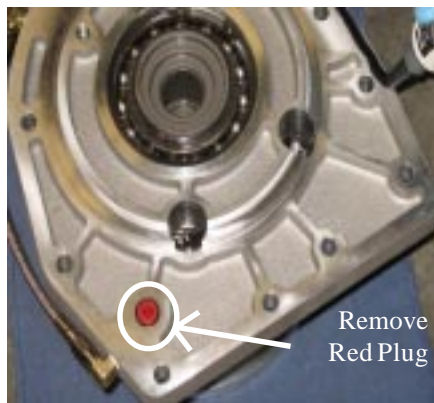


Figure 14: Plug/O-ring location



Figure 15: RTV Pattern

### RubiCrawler Install:

1. Remove the red plug and O-ring, from the RubiCrawler as seen in Figure 14. Remove the rag from the transmission and discard the red plug.
2. The RubiCrawler should be test fit into the vehicle by installing it without RTV to make sure the RubiCrawler flange face touches the transmission face completely. This is to insure that the output shaft is not too long. The product was designed for a standard output shaft stick-out, but the stick-out could vary which would cause a major problem. If you experience a problem, DO NOT proceed, call Advance Adapters. Steps 3 and 4, are time sensitive and should be completed in under 10 minutes.
3. Reclean the transmission face and the front face of the RubiCrawler using solvent. Apply an 1/8" bead of the supplied Chrysler (ATF+4 compatible) RTV to the RubiCrawler as shown in Figure 15.
4. **Reinstall the O-ring as shown in Figure 15. This is very important for the RubiCrawler and Transmission lubrication circuits.**
5. Lift the RubiCrawler into place, rotate the output shaft until the splines line up and the RubiCrawler slides on, make sure it slides on by hand far enough to squish the RTV. Fasten the RubiCrawler with the 10 supplied 10 mm socket head cap screws using an 8 mm hex bit socket and the 10mm button head cap screw that bolts on under the shifter box using a 6 mm hex bit socket. Torque all bolts to 40 ft-lbs. (See Figure 16)
6. Install the supplied RubiCrawler foot mount using the supplied 10 mm hex

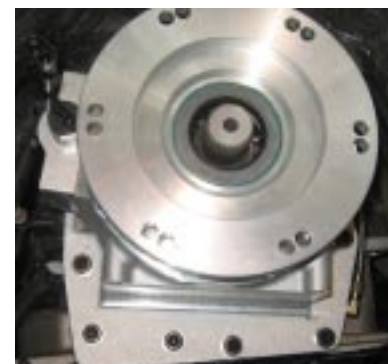


Figure 16: RubiCrawler Installed



Figure 17: Install Supplied Foot Mount

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head bolts and washers. Torque to 40 ft.-lbs. (See *Figure 17*) Bolt the top half of the factory rubber mount assembly to the RubiCrawler foot mount and the bottom half of the rubber mount to the cross-member.

- Lower the powertrain back down onto the cross-member and fasten the two halves of the rubber mount assembly together with the factory nuts.
- Reattach the fuel line tab to the RubiCrawler fuel line bracket with the factory bolt.

**NOTE:** If you purchased the optional RubiCrawler Control Module (42R800), now is the best time to install it. Refer to the RubiCrawler Control Module installation instructions at this time.

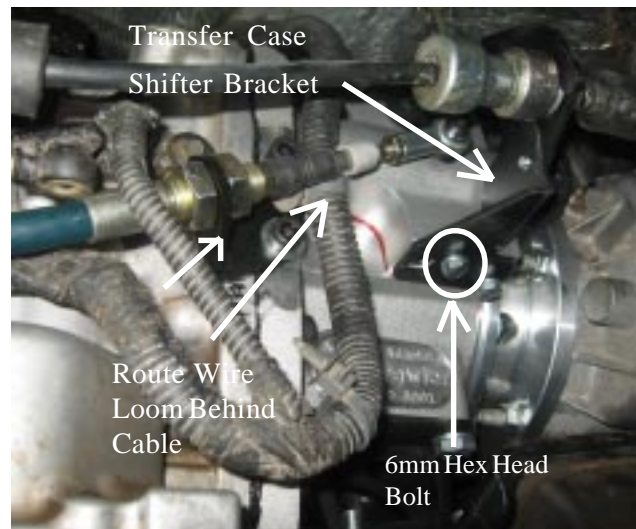
### RubiCrawler Shift Cable Installation:

- Remove the 5/8" lock nuts and the 1/4"-28 nut from the in-cab (non bracketed) end of the supplied RubiCrawler shift cable and push it through the newly cut slit in the floor grommet making sure the cable is routed to the passenger side of the stock cable.



*Figure 19: Cable Routing Under Transmission Cooler Lines*

- Route the cable as seen in the illustrations below. (See *Figure 19*)
- Bolt the RubiCrawler shifter bracket to the side of the RubiCrawler with the supplied 8 mm socket head cap screws and 1/4" washers using a 6 mm Allen wrench. (See *Figure 18*)
- Verify that the RubiCrawler shift cable travels 1/8" past the heim joint stud for both high and low positions. Bolt the heim joint to the lever using medium strength thread locking compound and the supplied 1/4-28 BHCS. (See *Figure 21*)



*Figure 18: Shifter Bracket Installation*



*Figure 20: Transfer Case Clocking Rotation*

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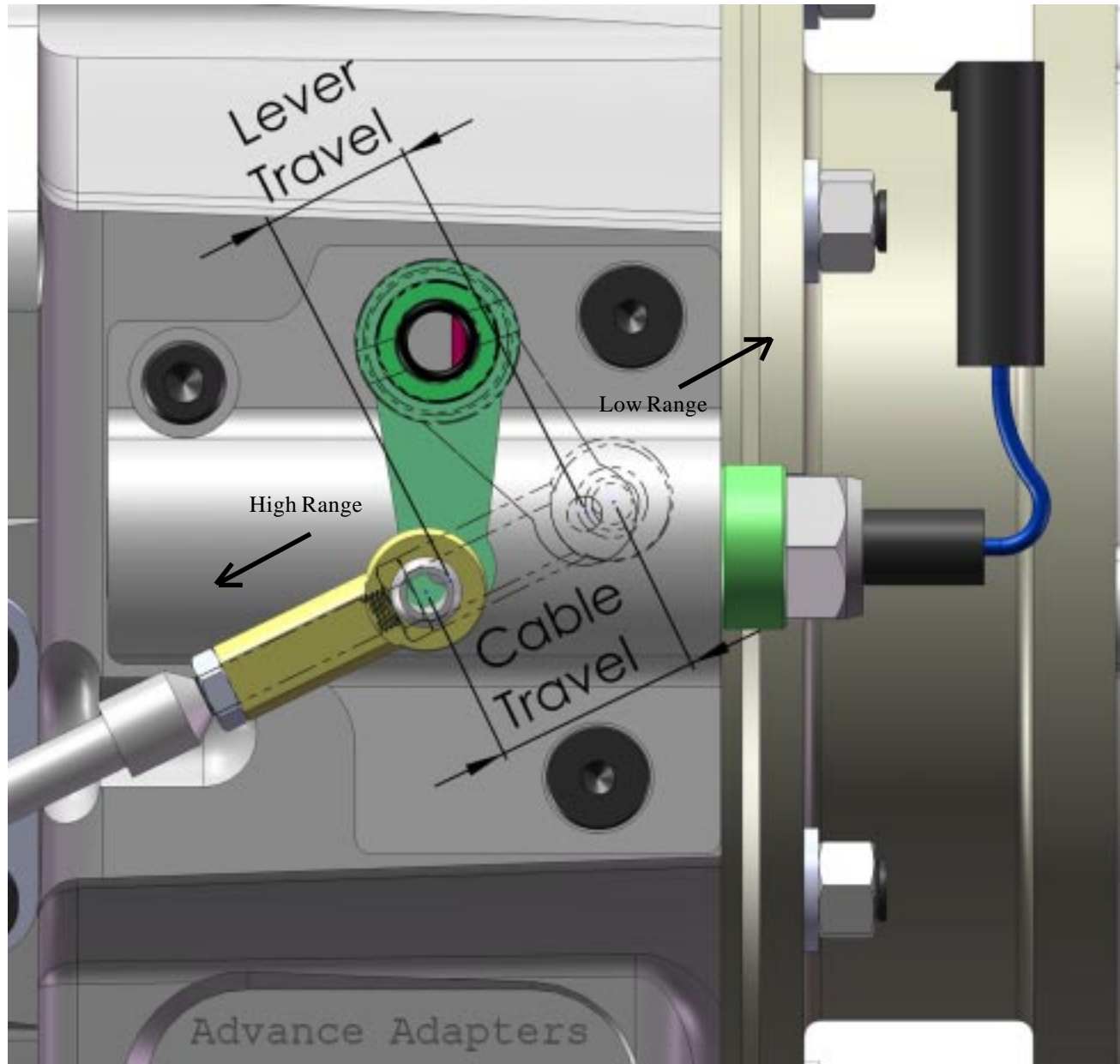
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*Figure 21: RubiCrawler cable shifter adjustment verification.  
See Step 4 of the RubiCrawler Shift Cable Installation*

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### Transfer Case Installation:

1. Install transfer case shifter bracket with supplied 6 mm hex head bolts and lock washers to the RubiCrawler shift housing. (See Figure 18)
2. Remove orange plastic retainer clip from transfer case shift cable and discard.
3. Lubricate the lip seal on the back of the RubiCrawler with ATF+4.
4. Use Figure 20 as a guide for proper clocking rotation. Shift the transfer case into any gear other than neutral. The RubiCrawler has a machined mark that designates the stock rotation hole set. Install the transfer case back into the vehicle by lifting it into place and rotating the rear yoke until the splines engage.
5. Use stubby 9/16" wrench to torque transfer case nuts to 25-30 ft.-lbs.
6. Insert the transfer case shift cable into the transfer case cable bracket previously installed. The cable is secured with the supplied cable retaining bracket and 1/4-20 button head bolt. The retaining bracket is mounted on the transfer case side of the shift cable bracket.
7. Shift the transfer case into 2wd-high by pulling the transfer case shift lever towards the front of the vehicle.
8. Verify that the transfer case cable travels forward of the heim stud by 1/8"-3/16". (See Figure 22)
9. Shift transfer case into 4wd-low by pushing the transfer case shift lever towards the rear of the vehicle.
10. Verify that the transfer case travels 1/8- 3/16" farther rearward than the heim stud.

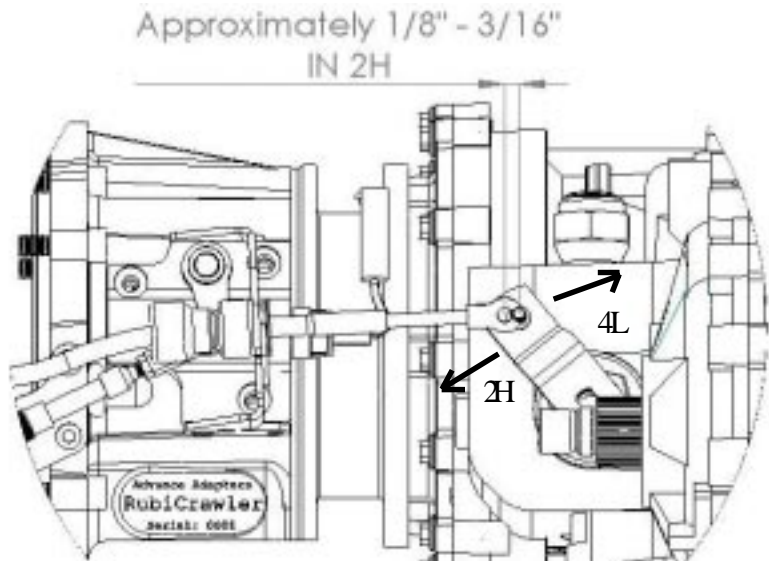


Figure 22: Verify Transfer Case Cable Travel



Figure 23: Washer Location



Figure 24: Install Shifter  
Base Plate

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P/N: RUBI-JKA

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## RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)

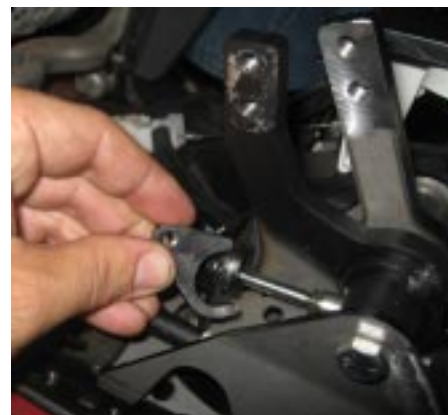
11. Snap plastic heim joint over transfer case shift lever stud.
12. Reinstall the transfer case breather hose and wiring harness.
13. Reinstall drive shafts and skid plates.

### Interior Installation:

1. Place the two supplied 1/4" washers on driver's rear mounting stud as shown in the picture. (See *Figure 23*)
2. Install the shifter base plate over the mounting studs and secure using the 4 OEM nuts. (See *Figure 24*)
3. Install 5/8" jamb-nut onto cable. Remove cable barrel from the shifter pivot assembly and thread completely onto cable. Leave barrel finger tight. Thread heim joint entirely onto cable end and tighten 1/4" jam nut.
4. Snap the transfer case cable into the transfer case cable bracket. (See *Figure 25*)
5. Install the stock plastic heim joint over the mounting stud on the shifter pivot assembly.
6. Slide cable barrel into shifter pivot assembly and attach retaining clip using supplied 5/16" button head bolt. (See *Figure 26*)
7. Bolt down the shifter pivot assembly to the lower base plate using the 7 supplied 1/4"-20 x 5/16" button head bolts. Start all bolts before final torquing. (See *Figure 27*)
8. Bolt stock cable retaining bracket to base plate with 2 supplied 1/4"-20 x 3/8" button head bolts. We recommend sliding the bracket completely forward in its slots, to maximize dash/knob clearance. (See *Figure 28*)
9. Shift the transfer case into 4wd-high and RubiCrawler



*Figure 25: Install Bracket to Stock Cable Shifter*



*Figure 26: Install RubiCrawler Cable Retaining Clip*



*Figure 27: Install Shifter Pivot Assembly*



*Figure 28: Install Stock Cable Retaining Bracket and Adjust Handle Location*

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## **RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)**

into high range. This will grant access to insert the 1/4"-28 x 5/8" button head bolt through the heim joint, threading into RubiCrawler shift lever. (See *Figure 29*)

10. Tighten 5/8" jam nut against cable barrel.
11. Refer to the disassembly instructions to reinstall the console, dash panels, and seat.
12. Attach the transfer case knob mount to the drivers side lever with the supplied 1/4"-28 x 5/8" flat head bolts. Use medium strength Loctite and torque to 10 ft-lbs. Snap factory plastic knob to the knob mount.
13. Attach the RubiCrawler knob mount to the passenger side shift lever, also with 1/4"-28 x 5/8" flat head bolts. Use medium strength Loctite and torque to 10 ft-lbs. Thread the 1/2"-13 jam nut and RubiCrawler knob onto knob mount tighten in correct orientation.



*Figure 29: Install Heim Joint to  
RubiCrawler Shift Lever*

### **Transmission Fluid Re-Fill:**

**Caution:** under filling or over filling can result in damage to your transmission. Only use Mopar approved, ATF+4 to refill the transmission.

1. Park on a flat surface and apply parking brake.
2. Start the engine and let the vehicle idle.
3. Apply the brakes and shift the transmission through all of the gears, then back to NEUTRAL and leave the vehicle idling.
4. Check the transmission fluid level with the dipstick. Using a clean funnel, add ATF+4 transmission fluid until the oil level is between the two holes marked "COLD". (Check to see if the transmission fluid level on the dipstick is even on both sides. If one side is noticeably higher than the other, the dipstick has picked up some fluid from the fill tube. Allow the fluid to drain down the transmission fill tube and recheck.
5. Now that the fluid level has been approximately achieved, drive the vehicle 5-10 miles making sure to manually shift the transmission through all gears.
6. Recheck the fluid level, with the transmission at operating temperature, vehicle idling on flat ground, the parking brake set, and the transmission in neutral. Add ATF+4 to raise the fluid level to a point between the two holes marked "HOT". Do this slowly so that the transmission fill tube has time to drain and gives accurate readings.

**NOTE: For proper operation of the RubiCrawler, refer to the Shifting Procedure/Warranty paperwork and the yellow tag attached to the RubiCrawler case.**

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## **RUBICRAWLER CRAWL BOX** **JEEP WRANGLER JK (2007-2011)**

### SHIFTING INSTRUCTIONS

**Transfer Case Shifting:** The transfer case can be shifted from two wheel drive to 4 wheel drive HIGH while the vehicle is moving. To shift the transfer case into four wheel drive LOW, you must shift the transmission to neutral and the vehicle speed must be below 2 mph. The transfer case can be shifted at a complete stop but it is easier to shift the unit when at a very slow roll.

**RubiCrawler Shifting:** The RubiCrawler must be shifted when the transmission is in neutral and the vehicle speed is less than 2 mph. The RubiCrawler can be shifted at a complete stop but it is easier to shift the unit when at a very slow roll. Do NOT try to force the shift levers as serious damage to the shifters or unit can occur.

**Serious damage to the RubiCrawler can occur if the proper shifting instructions are not followed.**

### Shift Knobs and Shift Patterns

The shift knobs and patterns can be seen below and on the next page.



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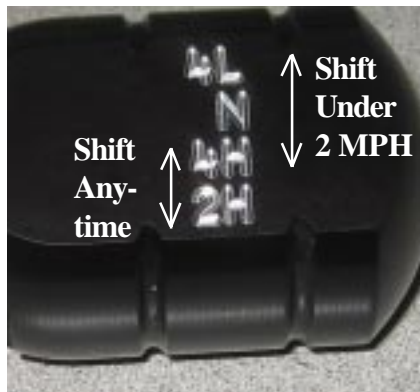
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## **RUBICRAWLER CRAWL BOX** **JEEP WRANGLER JK (2007-2011)**

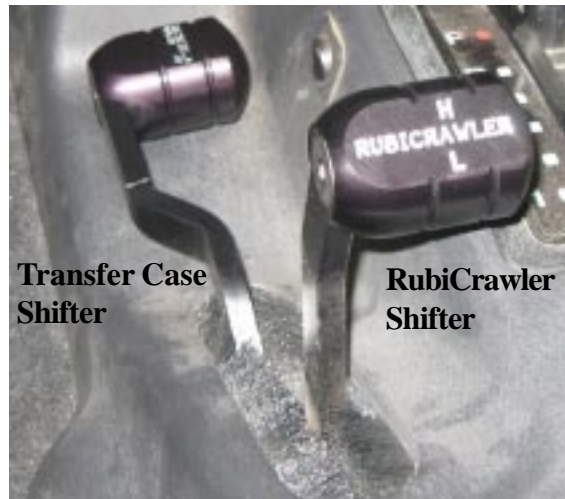
### *RubiCrawler Shift Pattern*



**TJ Non-Rubicon Knob**



**TJ Rubicon Knob**



**TJ Shift Knobs**

**Maximum Speed:** The Rubi-Crawler should not be operated at engine speeds above 5000rpm when the transmission is in overdrive. This over speed condition will cause damage to the bearings and geartrain in the RubiCrawler, in addition to possible damage to other components in the vehicle.

### **ADVANCE ADAPTERS, INC. LIMITED WARRANTY**

The RubiCrawler is guaranteed against defects in workmanship and materials for one year. This warranty begins from the date the unit is shipped from Advance Adapters. We log all units with a serial number at time of shipping. The warranty is void (as determined by Advance Adapters, Inc.) by misuse, abuse, improper maintenance or installation and or alterations to the product.

These guarantees do not cover any outside labor, shipping, towing, normal wear or any other unforeseen events that that may occur due to failure of a unit. Advance Adapters reserves the right to repair or replace any product.

*Do not disassemble or attempt to repair the RubiCrawler as doing so will void the warranty, just return the product as further described below.*

*All returns must have a returned goods authorization (RGA#) prior to shipping the product, and returns are to be sent prepaid freight. Please call 1-800-350-2223 and the sales department can assist you.*

**Warranty will be voided if** the proper transmission fluid levels are not maintained, if any transmission fluid other than ATF+4 is used, or the product has not been properly installed and instructions have not been followed.

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## **RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)**

### **KIT CONSISTS OF:**

| <b>No.</b> | <b>Qty</b> | <b>Part No.</b> | <b>Description</b>          |
|------------|------------|-----------------|-----------------------------|
| 1.         | 1          | 42R800          | CONTROL MODULE KIT          |
|            |            | KIT INCLUDES    |                             |
|            | 2          |                 | 8-32 SOCKET HEAD CAP SCREWS |
|            | 2          |                 | 8-32 NYLON LOCK NUTS        |
|            | 5          |                 | 1/4"x1" HEAT SHRINK         |
|            | 1          |                 | 3 WIRE DELPHI CONNECTOR     |
|            | 1          |                 | 2 WIRE DELPHI CONNECTOR     |
|            | 10         |                 | CABLE TIE - BLACK 4"        |



### **Tool List:**

1. DRILL
2. 13/64" OR 5.25mm DRILL BIT
3. SOLDERING IRON
4. HEATING ELEMENT (HEAT GUN OR LIGHTER)

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## **RUBICRAWLER CRAWL BOX** **JEEP WRANGLER JK (2007-2011)**

### **Introduction:**

The RubiCrawler Control Module was designed to integrate the vehicles wiring harness, transfer case position switch, and the RubiCrawlers position switch. This module will alert the vehicle when the RubiCrawler is shifted into low so that the vehicle will allow you to control the locking differentials, disconnect the sway bar(JK only), and disable the stability control(ESC). The control module will also communicate with an AeroForce gauge(sold separately) which will display the current shift state of the RubiCrawler.

### **Preparing the Wiring:**

**NOTE:** If installing a RubiCrawler simultaneously, start here when the transfer case is removed for ease of installation. If the RubiCrawler has been previously installed, you can still install this at any time.

**NOTE:** Pictures of connectors and the position switch can be found on the last page along with a wiring schematic.

1. Unplug the connector from the transfer case position switch if the transfer case is still in the vehicle.
2. Cut the connector off the wiring harness with about 3" of wire left on the connector.
3. Make sure that there is a piece of 1/4" heat shrink over **both** wires, and then one piece of heat shrink over **each** wire that was just cut off.
4. The Module is used for several applications, and you will be required to cut one of the male plug off the module. The plug that has the orange and brown wires connected need to be cut and wires striped, pull back the wire loom . You can use a piece of tape to hold the wire loom away from the end of the wires so you can solder.
5. Solder the T-case position plug to the orange and brown wires from the RubiCrawler control module. Polarity does not matter.
6. Heat shrink the soldered connections with the heat shrink placed over the individual wires in step 3.
7. Remove the tape from the wire loom and feed it into the heat shrink that is over both wires. If the wire loom is too long use some side cutters to shorten the wire loom. Once the wire loom is fed into the heat shrink, heat up the heat shrink sealing the wire loom into place.
8. Make sure there is a piece of heat shrink on each wire of the loose two wire Delphi connector that came with the control module.
9. Solder the loose two wire Delphi connector to the previously cut two wires in the vehicle wiring harness. See the chart below for vehicle specific wiring.

| Control Module Wire | Connect To       |                      |                    |
|---------------------|------------------|----------------------|--------------------|
|                     | 03-04 TJ         | 05-06 TJ             | 07-10 JK           |
| Blue                | Black/Light Blue | Dark Blue/Dark Green | Dark Blue/Yellow   |
| Green               | Brown/White      | Brown/White          | Yellow/Light Green |

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## RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)

10. Heat shrink the soldered connections made in the previous step.

### Installation:

1. Mount the control module in a secure place under the vehicle, not in direct contact with any hot objects. Our recommended mounting location can be seen in the pictures below. The wiring harness is long enough to reach all connectors if installed in the recommended place.

2. **Jeep JK:** We recommend drilling the holes into the gas tank skid plate as shown in *Figure 1*. To protect the gas tank when drilling through the plate, it is strongly recommended to place a piece of scrap metal between the gas tank and the skid plate. Do not forget to remove the scrap metal when done.

**Jeep TJ:** We recommend mounting it to the locker solenoid mounting plate. (See *Figure 2*).

3. Bolt the RubiCrawler Control Module into place using the two 8-32 Socket Head Cap Screws and the 8-32 Nylon Locking Nuts.

4. Plug in the connectors from the RubiCrawler Control Module to the RubiCrawler, the transfer case, the wiring harness connector, and the three wire delphi connector included in this kit.

5. The purple wire is a signal wire for an AeroForce gage(P/N 716091) which is an optional item that can be purchased separately.

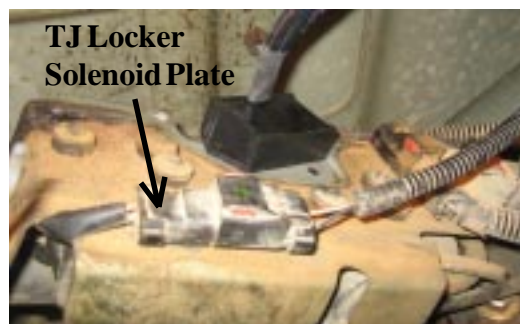
**Jeep JK:** It is recommended to run the purple wire up through the floor grommet directly over the rear face of the transmission. This will bring it up under the console which will be close to the required location to mount to the AeroForce gage(sold separately).

**Jeep TJ:** Route the purple wire through the firewall with the power and ground.

6. **Jeep JK:** Run the red(power) and black(ground) wires along the frame on the passenger side up to the fuse box. Make sure to safely zip-tie the wiring away from the exhaust, any pinch points or other hot objects. The Fuse attaches in the fuse box in the empty fuse slot labeled M14 - TTOW BUX. Refer to the under side of the fuse box lid for the proper location. Make sure to install it in the same direction as seen in the figure below.



*Figure 1: JK Mounting Location*



*Figure 2: TJ Mounting Location*



*Figure 3: JK Power Connection*



*Figure 4: JK Ground Terminal*

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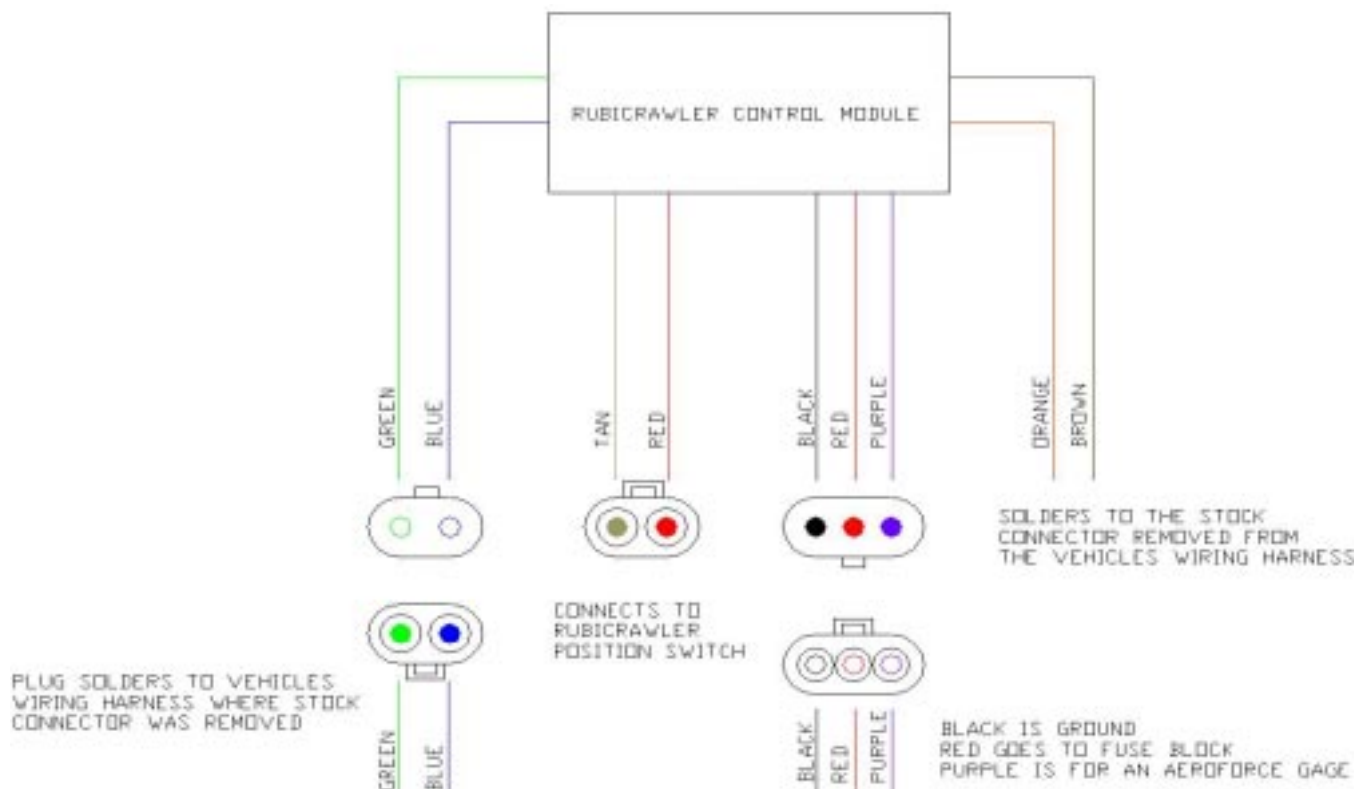
## RUBICRAWLER CRAWL BOX JEEP WRANGLER JK (2007-2011)



A notch will need to be cut into the fuse box for the wire to run out, which can also be seen in *Figure 3*. The ground can be run along the side of the fuse block to the ground terminal on the passenger fender next to the fuse box.

**Jeep TJ:** Route the power and ground through the firewall to the fuse box behind the glove box. Mount the ground to the firewall. The power should be plugged into the fuse block in an empty ignition hot fuse slot.

### Wiring Schematic



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